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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _16 November 2009_.

2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-26 and 31-34_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-26 and 31-34_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's amendment filed on 11/16/2009 has been entered. Claims 1-26 and

31- 34 are still pending in this application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

4.   Claims 1-6, 8, 10, 21, 23, 31, and 32 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Erimli (US Patent No. 6,980,520) in view of Bordogna et al.

(US Patent Publication No. 2004/0085904).

Regarding claim 1, (Currently Amended) Erimli teaches a method of managing

flow of datagram traffic, the method comprising:

receiving datagrams from a first port of a first device (Fig. 1, data transmission

from element 110 of the left Multiport Switch to element 110 of element 180 on the right)

at a first port of a second device (Column 3, lines 53-65 discloses the transceivers 130

may include 10/100 Mb/s physical layer transceivers that communicate with the

multiport switches 180 via respective serial media independent interfaces or reduced

media independent interfaces) using a pathway that is operably connected to a second

port of the first device and a second port of the second device (Fig. 1, connection

between left and right multiport switch);

determining (Column 7, lines 1-10 discloses a second switch receives –detects-

the MAC control pause frame and suspends transmission to multiport switch 180 of data

frames having the source address included in the pause frame. When a second switch

receives the pause frame, it stops sending data frames associated with the source

address included in the pause frame to the first switch. The second switch may also

forward a similar pause frame via the network), an individual port on the first device that

is causing oversubscription of the first port of the second device (Column 7, lines 1-10

discloses the second switch may also identify the port associated with the source

address included in the pause frame. Also, column 8, lines 45-48 discloses if a resource

on the multiport switch 180A becomes congested, the multiport switch 180A may

selectively request suspension of data transmissions from a particular source address);

receiving datagrams from a third port of the first device at the first port of the

second device using the pathway while the individual port on the first device is paused

(Fig. 1 and Fig. 3. Also, column 10, lines 63-65 discloses the multiport switch 180B,

however, may continue to transmit data frames to multiport switch 180A having other
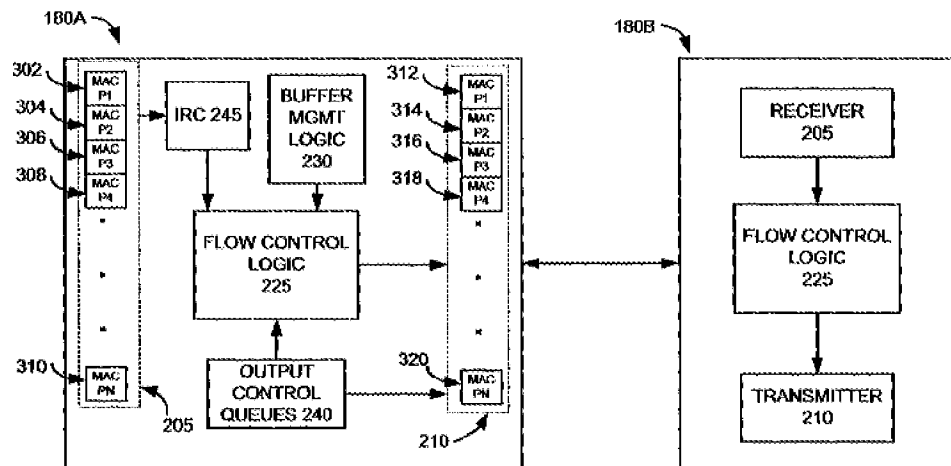
source addresses); and

FIG. 1
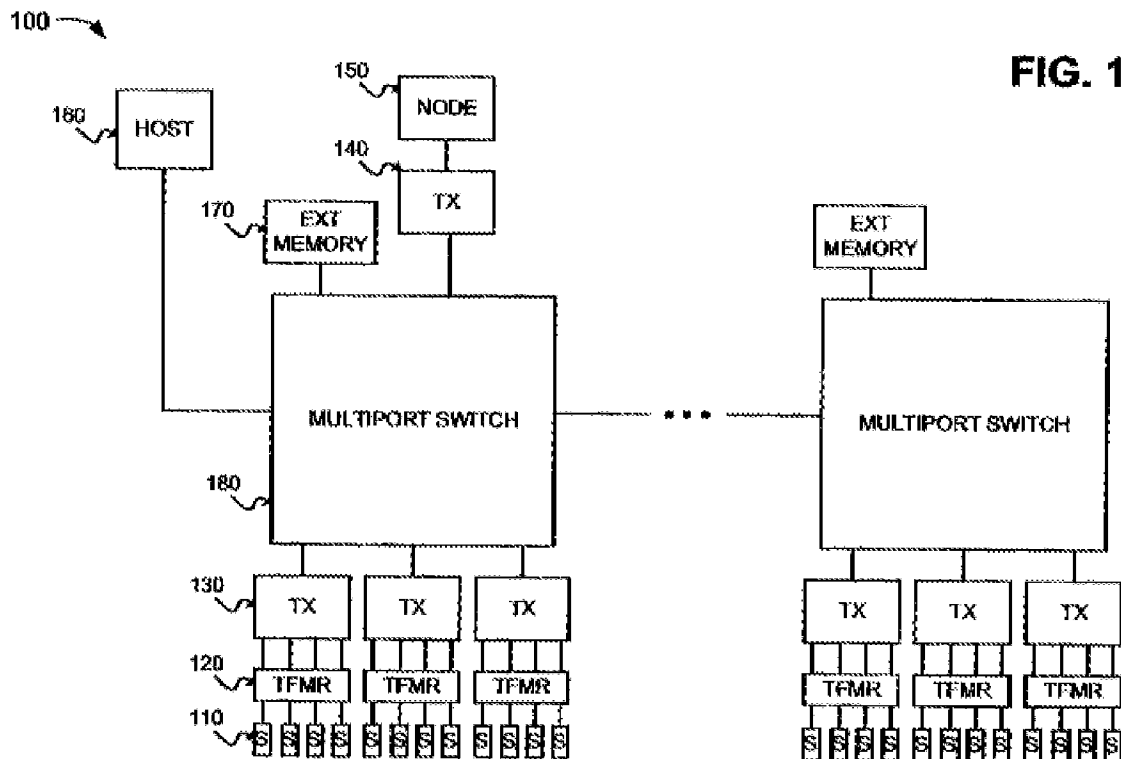
FIG. 3

transmitting a pause frame from the second device to the first device (Column 7,

lines 1-10 discloses the second switch may then transmit a similar MAC control pause

frame on the port associated with the source address), the pause frame causing the

individual port to pause transmission of the datagrams using the pathway (Column 8,

lines 45-48 discloses if a resource on the multiport switch 180A becomes congested,

the multiport switch 180A may selectively request suspension of data transmissions

from a particular source address. Fig. 1), but fail to disclose transmitting the pause

frame independently of a source address of the datagrams. However, Bordogna et al.

disclose transmitting the pause frame independently of a source address of the

datagrams (Paragraph [0025] discloses a congestion condition can be detected by a

receiving end station 170-n, and a port-based pause frame can be sent from the LAN

160 to the GFP mapping function 155).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the pause frame transmission method of Erimli

to include port-based pause transmission taught by Bordogna et al. in order to have a

lossless data transmission and decrease congestion.

Regarding claim 2, Erimli in view of Bordogna et al. teach the method of claim

1, Erimli further teaches the method further comprising:

Re-activating the individually paused port including transmitting a re-activation

signal to the paused port (Column 1, lines 32-41 discloses the pause frame instructs the

stations receiving the pause frame to stop sending data for a period of time).

Regarding claim 3, Erimli in view of Bordogna et al. teach the method of claim

1, Erimli further teaches the method further comprising:

re-activating the individually paused port pursuant to the detection of a condition

wherein the first port of the second device has datagram traffic flowing there through in

an amount that is below a lower trigger value (Column 8, lines 58-67 discloses the

congestion signal may include the source address of the data packet that caused the

free buffer queue to reach the predetermined threshold).

Regarding claim 4, Erimli in view of Bordogna et al. teach the method of claim

1, Erimli further teaches the method further comprising:

re-activating the individually paused port pursuant to the passage of a pre\-

determined time increment (Column 1, lines 32-41 discloses the pause frame instructs

the stations receiving the pause frame to stop sending data for a period of time).

Regarding claim 5, Erimli in view of Bordogna et al. teach the method of claim

1, Erimli further teaches the method wherein the transmitting the pause frame

comprises using in-band control frames to pause the individual port (Fig. 3, discloses

the flow control logic 225 may then generate a MAC control pause frame including this source address information. Also, FIG. 6 illustrates an exemplary MAC control pause frame 600. The MAC control pause frame 600 also includes a source address field 610 that identifies the source address associated with the frame causing the congestion).

Regarding claim 6, Erimli in view of Bordogna et al. teach the method of claim 1, Erimli further teaches the method wherein the transmitting the pause frame comprises using separate pathways between the first and second networked devices to transmit datagrams and control frames (Fig. 2, discloses the data bus 215 may include one or more conductors that connect the receiver 205, the transmitter 210, the IRC 245, and the external memory interface 265. Also, Fig. 3 , discloses the flow control logic 225 may then generate a MAC control pause frame including this source address information).

Regarding claim 8, Erimli in view of Bordogna et al. teach the method of claim 1, Erimli further teaches the method wherein the transmitting the pause frame comprises referencing a listing of ports that are over-subscribed (Fig. 6. field 610).

Regarding claim 10, Erimli in view of Bordogna et al. teach the method of claim 1, Erimli further teaches the method wherein the determining comprises determining individual ports on devices other than the first and second device (Column 7, lines 1-29 and FIG. 3 illustrates an exemplary implementation of the present invention in which two multiport switches, labeled 180A and 180B, are coupled together).

Regarding claim 21, (Currently Amended) Erimli teaches a communications device comprising:

a first communications means for receiving datagrams from a first port of a first

data distribution means device (Fig. 1, data transmission from element 110 of the left

Multiport Switch to element 110 of element 180 on the right) at a first port of a second

data distribution means (Column 3, lines 53-65 discloses the transceivers 130 may

include 10/100 Mb/s physical layer transceivers that communicate with the multiport

switches 180 via respective serial media independent interfaces or reduced media

independent interfaces);

determining means for determining (Column 7, lines 1-10 discloses a second

switch receives –detects- the MAC control pause frame and suspends transmission to

multiport switch 180 of data frames having the source address included in the pause

frame. When a second switch receives the pause frame, it stops sending data frames

associated with the source address included in the pause frame to the first switch. The

second switch may also forward a similar pause frame via the network), individual ports

on the first data distribution means that cause oversubscription of the first port of the

second data distribution means (Column 7, lines 1-10 discloses the second switch may

also identify the port associated with the source address included in the pause frame.

Also, column 8, lines 45-48 discloses if a resource on the multiport switch 180A

becomes congested, the multiport switch 180A may selectively request suspension of

data transmissions from a particular source address);

means for transferring receiving datagrams from a second port of the first data

distribution means (Column 7, lines 1-10 discloses the second switch may then transmit

a similar MAC control pause frame on the port associated with the source address) at

the first port of the second data distribution means, while the individual ports are paused

(Column 8, lines 45-48 discloses if a resource on the multiport switch 180A becomes

congested, the multiport switch 180A may selectively request suspension of data

transmissions from a particular source address. Fig. 1); and

control means for selectively pausing the individual ports that are causing

oversubscription of the first port of the second data distribution means (Column 7, lines

1-10 discloses the second switch may also identify the port associated with the source

address included in the pause frame. Also, column 8, lines 45-48 discloses if a resource

on the multiport switch 180A becomes congested, the multiport switch 180A may

selectively request suspension of data transmissions from a particular source address),

but fail to teach pausing feature independently of a source address of the datagrams.

However, Bordogna et al. teach pausing feature independently of a source address of

the datagrams (Paragraph [0025] discloses a congestion condition can be detected by a

receiving end station 170-n, and a port-based pause frame can be sent from the LAN

160 to the GFP mapping function 155).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the pause frame transmission method of Erimli

to include port-based pause transmission taught by Bordogna et al. in order to have a

lossless data transmission and decrease congestion.

.**Regarding claim 23,** Erimli in view Bordogna et al. teach the device of claim 21,

further comprising storage means for storing information concerning which ports in the

network are over-subscribed (Fig. 3, element 240).

27-30. (Cancelled)

Regarding claim 31, Erimli teaches a communications device comprising:

an interconnect port controller configured to receive datagrams from a first port of a first device at a first port of the device; and

a memory unit controller configured to determine, at the device, individual ports on the first device that cause oversubscription of the first port of the device (Fig. 1, data transmission from element 110 of the left Multiport Switch to element 110 of element 180 on the right), wherein

the interconnect portion controller is configured to selectively pause the individual ports of the first device that are causing oversubscription of the first port of the device (Fig. 3, Flow Control Logic 225), and to receive datagrams from a second port of the first device at the first port of the device, while the individual ports are paused (Column 3, lines 53-65 discloses the transceivers 130 may include 10/100 Mb/s physical layer transceivers that communicate with the multiport switches 180 via respective serial media independent interfaces or reduced media independent interfaces. Also, column 10, lines 63-67) but fail to teach pausing feature independently of a source address of the datagrams. However, Bordogna et al. teach pausing feature independently of a source address of the datagrams (Paragraph [0025] discloses a congestion condition can be detected by a receiving end station 170-n, and a port-based pause frame can be sent from the LAN 160 to the GFP mapping function 155).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pause frame transmission method of Erimli

to include port-based pause transmission taught by Bordogna et al. in order to have a

lossless data transmission and decrease congestion.

Regarding claim 32, Erimli in view of Bordogna et al. teach the device of claim

31, further comprising:

a memory unit configured to store information concerning which ports in the

device are over-subscribed (Fig. 2, discloses the data bus 215 may include one or more

conductors that connect the receiver 205, the transmitter 210, the IRC 245, and the

external memory interface 265. Also, Fig. 3 , discloses the flow control logic 225 may

then generate a MAC control pause frame including this source address information)..

5.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli in

view of Bordogna et al. and further in view of Kim et al. (US Patent Publication No.

2003/0219027).

Regarding claim 7, (Currently Amended) Erimli in view of Bordogna et al. teach

the method of claim 1, wherein the transmitting the pause frame (Column 7, lines 1-10

discloses the second switch may then transmit a similar MAC control pause frame on

the port associated with the source address) but fail to teach using a non-memory-

consuming communication to pause the individual port. However, Kim et al. teach using

a non-memory-consuming communication to pause the individual port (Paragraph

[0007] discloses the non-memory semiconductor performs a traffic transmission

between ports in network equipment such as a router and switch, and performs a

programming for an intelligent switching function in such a way that various kinds of

multimedia Internet traffic services are available).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the method of Erimli in view of Bordogna et al. to

include the non-memory feature taught by Kim et al. in order to increase the speed of

the communication and reduce the delay that is caused by buffers.

6.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli in

view of Bordogna et al. and further in view of Montalvo et al. (US Patent Publication No.

2003/0147385).

Regarding claim 9, (Currently Amended) Erimli in view of Bordogna et al. teach

the method of claim 8, wherein the transmitting the pause frame (Column 7, lines 1-10

discloses the second switch may then transmit a similar MAC control pause frame on

the port associated with the source address) but fail to teach the method wherein

periodically updating the listing of ports that are over-subscribed. However, Monralvo et

al. teach the method wherein periodically updating the listing of ports that are over-

subscribed (Paragraph [0054] discloses the mapping in the table 512 in ingress

switching device 110 is reassigned to change the port assignment such that the egress

traffic of an over-subscribed intermediate port on the egress switching device 160 is

diverted to an under-subscribed intermediate port. The QID-to-intermediate port

mapping is preferably updated periodically, every sixty seconds in some embodiments).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the method of Erimli in view of Bordogna et al. to

include the periodically updating the table of paused ports taught by Montalvo et al. in

order to have the updated information known throughout the network and as a result

less delay and increased precision.

7.   Claims 11-20, 24, 26, 33, and 34 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Erimli in view of Bordogna et al. and further in view of Levine (US

Patent No. 6,504,818).

Regarding claim 11, (Currently Amended) Erimli teaches a method of managing

flow of datagram traffic, the method comprising:

receiving datagrams from a first port of a first device (Fig. 1, data transmission

from element 110 of the left Multiport Switch to element 110 of element 180 on the right)

at a first port of a second device (Column 3, lines 53-65 discloses the transceivers 130

may include 10/100 Mb/s physical layer transceivers that communicate with the

multiport switches 180 via respective serial media independent interfaces or reduced

media independent interfaces) using a pathway that is operably connected to a second

port of the first device and a second port of the second device (Fig. 1, connection

between left and right multiport switch);

determining (Column 7, lines 1-10 discloses a second switch receives –detects-

the MAC control pause frame and suspends transmission to multiport switch 180 of data

frames having the source address included in the pause frame. When a second switch

receives the pause frame, it stops sending data frames associated with the source

address included in the pause frame to the first switch. The second switch may also

forward a similar pause frame via the network), an individual port on the first device that

is causing oversubscription of the first port of the second device (Column 7, lines 1-10

discloses the second switch may also identify the port associated with the source

address included in the pause frame. Also, column 8, lines 45-48 discloses if a resource

on the multiport switch 180A becomes congested, the multiport switch 180A may

selectively request suspension of data transmissions from a particular source address);

signaling the first port of the first device to continue sending send fewer

datagrams to the first port of the second device (Column 7, lines 1-10 discloses the

second switch may then transmit a similar MAC control pause frame on the port

associated with the source address), based on the determining when an over-

subscription is detected at the first port of the second device (Column 8, lines 45-48

discloses if a resource on the multiport switch 180A becomes congested, the multiport

switch 180A may selectively request suspension of data transmissions from a particular

source address. Fig. 1); and

receiving datagrams from a third port of the first device at the first port of the

second device using the pathway that is operably connected to the second port of the

first device and the second port of the second device, while continuing to receive the

datagrams from the first port of the first device at the first port of the second device (Fig.

1 and Fig. 3. Also, column 10, lines 63-65 discloses the multiport switch 180B, however,

may continue to transmit data frames to multiport switch 180A having other source

addresses), but fail to teach sending features independently of a source address of the

datagrams. However, Bordogna et al. teach sending features independently of a source

address of the datagrams (Paragraph [0025] discloses a congestion condition can be

detected by a receiving end station 170-n, and a port-based pause frame can be sent

from the LAN 160 to the GFP mapping function 155). Also, fail to teach the transmission and reception at a reduced rate. However, Levine teaches the transmission and reception datagrams at a reduced rate (Column 1, lines 45 - 65 discloses if a global congestion threshold is exceeded, the egress port generates a feedback control signal to all sources causing the sources to reduce the rate at which they deliver data to the network for delivery to the egress port. Other control schemes provide for local congestion detection, in which the egress port identifies individual sources from which it receives data. If data received from any one source exceeds a local congestion threshold associated with the source, the egress port generates a second type of feedback control signal to the source causing it to reduce the rate at which it generates data for the egress port).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pause frame transmission method of Erimli to include port-based pause transmission taught by Bordogna et al. in order to have a lossless data transmission and decrease congestion. Furthermore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify a method of Erimli in view of Bordogna et al. to include the rate reduction taught by Levine in order to reduce delay and increase the dependability of the network communications.

Regarding claim 12, Erimli in view of Bordogna et al. and further in view of Levine teach the method of claim 11, Erimli further teaches wherein the signaling comprises signaling the first port of the first device to send datagrams in proportion to a total number of datagrams attempting to reach the first port of the second device

(Column 3, lines 53-65 discloses the transceivers 130 may include 10/100 Mb/s

physical layer transceivers that communicate with the multiport switches 180 via

respective serial media independent interfaces or reduced media independent

interfaces).

Regarding claim 14, Erimli in view of Bordogna et al. and further in view of

Levine teach the method of claim 11, Erimli further teaches the method wherein the

signaling comprises broadcasting a signal that alerts ports on the network that the first

port of the second device is over-subscribed (Column 8, lines 4-15 discloses

multicasting which is a controlled broadcast).

Regarding claim 15, Erimli in view of Bordogna et al. and further in view of

Levine teach the method of claim 11, Erimli further teaches the method wherein the

receiving datagrams from a first port of a first device at a first port of a second device

comprises referencing a listing of ports on the network that are over-subscribed before

transferring a datagram between the first port of the first device to the first port of the

second device (Column 3, lines 53-65 discloses the transceivers 130 may include

10/100 Mb/s physical layer transceivers that communicate with the multiport switches

180 via respective serial media independent interfaces or reduced media independent

interfaces).

Regarding claim 16, Erimli in view of Bordogna et al. and further in view of

Levine teach the method of claim 11, Erimli further teaches the method further

comprising: resuming unrestricted datagram receipt at the first port of the second device

including broadcasting a signal (Column 1, lines 32-41 discloses the pause frame

instructs the stations receiving the pause frame to stop sending data for a period of

time. Also, column 3, lines 53-65 discloses the transceivers 130 may include 10/100

Mb/s physical layer transceivers that communicate with the multiport switches 180 via

respective serial media independent interfaces or reduced media independent

interfaces).

Regarding claim 17, Erimli in view of Bordogna et al. and further in view of

Levine teach the method of claim 11, Erimli further teaches the method further

comprising: resuming unrestricted datagram receipt at the first port of the second device

when a total number of datagrams attempting to reach the first port of the second

device falls below a lower trigger value (Column 8, lines 58-67 discloses the congestion

signal may include the source address of the data packet that caused the free buffer

queue to reach the predetermined threshold).

Regarding claim 18, Erimli in view of Bordogna et al. and further in view of

Levine teach the method of claim 11, Erimli further teach the method further comprising:

resuming unrestricted datagram receipt at the first port of the second device after

passage of a pre-determined time increment (Column 1, lines 32-41 discloses the

pause frame instructs the stations receiving the pause frame to stop sending data for a

period of time).

Regarding claim 19, Erimli in view of Bordogna et al. and further in view of

Levine teach the method of claim 11, Erimli further teach the method wherein the

signaling comprises using in-band control frames (Fig. 3, discloses the flow control logic

225 may then generate a MAC control pause frame including this source address

information. Also, FIG. 6 illustrates an exemplary MAC control pause frame 600. The

MAC control pause frame 600 also includes a source address field 610 that identifies

the source address associated with the frame causing the congestion).

Regarding claim 20, Erimli in view of Bordogna et al. and further in view of

Levine teach the method of claim 11, Erimli further teaches the method wherein the

signaling comprises using a separate link to transmit control frames (Fig. 2, discloses

the data bus 215 may include one or more conductors that connect the receiver 205,

the transmitter 210, the IRC 245, and the external memory interface 265. Also, Fig. 3 ,

discloses the flow control logic 225 may then generate a MAC control pause frame

including this source address information).

Regarding claim 24, (Currently Amended) Erimli teaches a communications

device comprising:

first communications means for transferring receiving datagrams from a first port

of a first data distribution means (Fig. 1, data transmission from element 110 of the left

Multiport Switch to element 110 of element 180 on the right) at a first port of a second

data distribution means (Column 3, lines 53-65 discloses the transceivers 130 may

include 10/100 Mb/s physical layer transceivers that communicate with the multiport

switches 180 via respective serial media independent interfaces or reduced media

independent interfaces);

determining means (Column 7, lines 1-10 discloses a second switch receives –

detects- the MAC control pause frame and suspends transmission to multiport switch

180 of data frames having the source address included in the pause frame. When a

second switch receives the pause frame, it stops sending data frames associated with the source address included in the pause frame to the first switch. The second switch may also forward a similar pause frame via the network), for determining an individual port on the first data distribution means that is causing oversubscription of the first port of the second data distribution means (Column 7, lines 1-10 discloses the second switch may also identify the port associated with the source address included in the pause frame. Also, column 8, lines 45-48 discloses if a resource on the multiport switch 180A becomes congested, the multiport switch 180A may selectively request suspension of data transmissions from a particular source address); but fail to teach sending fewer datagrams independently of a source address of the datagrams. However, Bordogna et al. teach sending fewer datagrams independently of a source address of the datagrams (Paragraph [0025] discloses a congestion condition can be detected by a receiving end station 170-n, and a port-based pause frame can be sent from the LAN 160 to the GFP mapping function 155).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pause frame transmission method of Erimli to include port-based pause transmission taught by Bordogna et al. in order to have a lossless data transmission and decrease congestion.

Further more, control means for signaling the first port of the first data distribution means to send datagrams to the first port of the second data distribution means (Column 7, lines 1-10 discloses the second switch may then transmit a similar MAC control pause frame on the port associated with the source address), based on the

determining when an over subscription is detected at the first port of the second data

distribution means (Column 8, lines 45-48 discloses if a resource on the multiport switch

180A becomes congested, the multiport switch 180A may selectively request

suspension of data transmissions from a particular source address. Fig. 1); and

       means for transferring datagrams from a second port of the first data distribution

means at the first port of the second data distribution means, while continuing to receive

datagrams from the first port of the first data distribution means at the first port of the

second data distribution means (Fig. 1 and Fig. 3. Also, column 10, lines 63-65

discloses the multiport switch 180B, however, may continue to transmit data frames to

multiport switch 180A having other source addresses). But fail to teach the transmission

and reception at a reduced rate. However, Levine teaches the transmission and

reception datagrams at a reduced rate (Column 1, lines 45 - 65 discloses if a global

congestion threshold is exceeded, the egress port generates a feedback control signal

to all sources causing the sources to reduce the rate at which they deliver data to the

network for delivery to the egress port. Other control schemes provide for local

congestion detection, in which the egress port identifies individual sources from which it

receives data. If data received from any one source exceeds a local congestion

threshold associated with the source, the egress port generates a second type of

feedback control signal to the source causing it to reduce the rate at which it generates

data for the egress port).

       Therefore, it would be obvious to one of ordinary skill in the art at the time the

invention was made to modify a method of Erimli in view of Bordogna et al. to include

the rate reduction taught by Levine in order to reduce delay and increase the

dependability of the network communications.

Regarding claim 26, Erimli in view of Bordogna et al. and further in view of

Levine teach the device of claim 24, Erimli further teaches the device further

comprising:

storage means for storing information concerning which ports in the network are

over-subscribed (Fig. 3, element 225).

Regarding claim 33, (Currently Amended) Erimli teaches a communications

device comprising:

an interconnect port controller configured to receive datagrams from a first port of

a first device at a first port of the device (Fig. 1, data transmission from element 110 of

the left Multiport Switch to element 110 of element 180 on the right. Also, Fig. 3,

element 225); and

a memory unit controller configured to determine, at the device, individual ports

on the first device that cause oversubscription of the first port of the device (Column 7,

lines 1-10 discloses a second switch receives –detects- the MAC control pause frame

and suspends transmission to multiport switch 180 of data frames having the source

address included in the pause frame. When a second switch receives the pause frame,

it stops sending data frames associated with the source address included in the pause

frame to the first switch. The second switch may also forward a similar pause frame via

the network. Also, column 8, lines 45-48 discloses if a resource on the multiport switch

180A becomes congested, the multiport switch 180A may selectively request

suspension of data transmissions from a particular source address), wherein

the interconnect port controller is configured to signal the first port of the first

device (Column 7, lines 1-10 discloses the second switch may then transmit a similar

MAC control pause frame on the port associated with the source address) to continue

sending datagrams to the first port of the second device, based on the determining, and

configured to receive datagrams from the first port of the first device at the first port of

the device (Fig. 1 and Fig. 3. Also, column 10, lines 63-65 discloses the multiport switch

180B, however, may continue to transmit data frames to multiport switch 180A having

other source addresses). But fail to teach sending feature independently of a source

address of the datagrams. However, Bordogna et al. teach sending feature

independently of a source address of the datagrams (Paragraph [0025] discloses a

congestion condition can be detected by a receiving end station 170-n, and a port-

based pause frame can be sent from the LAN 160 to the GFP mapping function 155),

and also fail to teach the transmission and reception at a reduced rate. However, Levine

teaches the transmission and reception datagrams at a reduced rate (Column 1, lines

45 - 65 discloses if a global congestion threshold is exceeded, the egress port

generates a feedback control signal to all sources causing the sources to reduce the

rate at which they deliver data to the network for delivery to the egress port. Other

control schemes provide for local congestion detection, in which the egress port

identifies individual sources from which it receives data. If data received from any one

source exceeds a local congestion threshold associated with the source, the egress port

generates a second type of feedback control signal to the source causing it to reduce

the rate at which it generates data for the egress port).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the pause frame transmission method of Erimli

to include port-based pause transmission taught by Bordogna et al. in order to have a

lossless data transmission and decrease congestion. Furthermore, it would be obvious

to one of ordinary skill in the art at the time the invention was made to modify a method

of Erimli in view of Bordogna et al. to include the rate reduction taught by Levine in

order to reduce delay and increase the dependability of the network communications.

Regarding claim 34, Erimli in view of Bordogna et al. and further in view of

Levine teach the device of claim 33 , Erimli further teaches the device further

comprising:

a memory unit configured to store information concerning which ports in the

network are over-subscribed (Fig. 2, discloses the data bus 215 may include one or

more conductors that connect the receiver 205, the transmitter 210, the IRC 245, and

the external memory interface 265. Also, Fig. 3 , discloses the flow control logic 225

may then generate a MAC control pause frame including this source address

information).

8.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli in

view of Bordogna et al. and further in view of Levine and further in view of Kim et al. (US

Patent Publication No. 2003/0219027).

Regarding claim 13, (Previously Presented) Erimli in view of Bordogna et al. and further in view of Levine teach the method of claim 11, Erimli further teach the method wherein the signaling is performed (Column 7, lines 1-10 discloses the second switch may then transmit a similar MAC control pause frame on the port associated with the source address) but fail to teach the method using a non-memory-consuming communication to signal the first port of the first device. However, Kim et al. teach the method using a non-memory-consuming communication to signal the first port of the first device (Paragraph [0007] discloses the non-memory semiconductor performs a traffic transmission between ports in network equipment such as a router and switch, and performs a programming for an intelligent switching function in such a way that various kinds of multimedia Internet traffic services are available).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Erimli in view of Bordogna et al.and further in view of Levine to include the non-memory feature taught by Kim et al. in order to increase the speed of the communication by reducing the delay that is caused by buffers.

9.   Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli (US Patent No. 6,980,520) in view of Bordogna et al. further in view of Leach, JR. et al (US Patent Publication No. 2002/0089994).

Regarding claim 22, (Currently Amended) Erimli in view of Bordogna et al. teach the device of claim 21 wherein, further comprising: a second communications means between the first data distribution means and the second data distribution means

(Column 11, lines 21-28 disclose connection using other source addresses) but fail to explicitly teach the system wherein the second communications means that is non-lossy. However, Leach Jr et al. teach the system wherein the second communications means that is non-lossy (See paragraph [0008]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the communication means disclosed by Erimli in view of Bordogna et al. to perform as a lossy less communication link taught by Leach,, JR et al. in order to increase the quality of communication and decrease the delay caused by it.

Regarding claim 25, (Currently Amended) Erimli in view of Bordogna et al. teach the device of claim 24, wherein further comprising: a second communications means for allowing communication between the first the second data distribution means is attached to, wherein the a second communications means (Column 11, lines 21-28 disclose connection using other source addresses), but fail to teach the system wherein the second communications means that is non-lossy. However, Leach, JR. et al teach the system wherein the second communications means that is non-lossy (See paragraph [0008]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the communication means disclosed by Erimli in view of Bordogna et al. to perform as a lossy less communication link taught by Leach,,

JR et al. in order to increase the quality of communication and decrease the delay

caused by it.

Response to Arguments

10.   Applicant's arguments with respect to claims 1-26 and 31-34 have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

11.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

12.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIMA MAHMOUDZADEH whose telephone number is (571)270-3527. The examiner can normally be reached on Monday - Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NIMA MAHMOUDZADEH/
Examiner, Art Unit 2477

/Gregory B Sefcheck/
Primary Examiner, Art Unit 2477
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